# Derrick Lin

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**Relevant Links:** LinkedIn | GitHub |

## EDUCATION

**University of California, San Diego**                                                          **Expected: June 2025**

Bachelor of Science in Computer Engineering and Cognitive Science (Machine Learning & Neural Computation), GPA: 3.5

**Relevant Courses:** Software Engineering, Data Structures/Algorithms, Machine Learning, Quantitative Finance, Operating Systems, Computer Graphics, Computer Architecture

**Academic Awards:** Provost Honors (3x)

## WORK EXPERIENCE

**Supermicro**                                                                                    **June 2024 - Present**

*System Engineer (GPU Team)*                                                                       San Jose, CA

- Modified ARS-221GL-NR system to add 2 additional Nvidia H100 NVL GPUs, utilizing **NVLink** and the Nvidia Grace superchip to **decrease data processing times by 50%**
- Utilized **Horovod** to orchestrate distributed deep learning training across multiple GPUs, significantly enhancing computational efficiency and model training speed
- Developed and trained neural network architectures in **C++** using **Caffe**, leveraging **CUDA for GPU-accelerated processing**, significantly enhancing performance in deep learning tasks

**CodePath**                                                                                      **May 2024 - Present**

*Tech Fellow*                                                                                      San Francisco, CA

- Mentored **30 students** weekly in algorithms and data structures, improving their problem-solving accuracy by **25%**

**Stanford University**                                                                           **April 2024 - June 2024**

*Section Leader*                                                                                   Palo Alto, CA

- Educated over **300 students** in Python programming and data structures, achieving a **95% satisfaction rating**
- Led interactive weekly lab sessions for **100+ student**s and prepared comprehensive lesson plans
- Assisted students with programming assignments during biweekly office hours, aiding over **15 students per week**

**Qualcomm Institute**                                                                           **January 2024 - June 2024**

*Software Engineering Intern*                                                                      La Jolla, CA

- Developed a high-resolution **digital twin** of the UCSD Campus using drone-based 3D photogrammetry and modeling
- Enhanced solar panel positioning and weather modeling by integrating **Python** scripting in Unreal Engine with a C++ plugin and utilizing the **AWIPS library** to optimize daily sunlight variations

**LearnWise AI**                                                                                 **October 2023 - December 2023**

*Software Engineering Intern*                                                                      Remote, CA

- Developed and deployed **AWS Lambda** functions, resulting in faster response times for products like chatbots
- Used **Python** and **boto**3 to initiate AWS batch jobs to sort and clean customer data, resulting in a **40% reduction** in manual work through automated data processing tasks

## LEADERSHIP EXPERIENCE

**Computer Science and Engineering Society (CSES) at UCSD**                                        **September 2023 - June 2024**

*Event Director*                                                                                   La Jolla, CA

- Directed **40+ technical workshops and social events** annually, reaching over **2000 students**
- Launched a **mentorship program** that increased student participation in computer science by 50%

## PROJECTS

**Dev Journal** | Demo | Github Code | (HTML, CSS, JavaScript, Node.js, Express.js, Jest-Puppeteer, SQLite)          **2024**

- Created a privacy-focused note-taking application using **AGILE methodologies**, improving data security and user experience
- Integrated a database to enforce character limits on posts, enhancing data integrity and user experience

**Fossil Fuel Predictor** | Demo | Github Code | (Flask, HTML, CSS, JavaScript, Python)                             **2024**

- Developed a data analysis platform to analyze and visualize correlations between dinosaur bone discoveries and fossil fuel production
- Developed a **SARIMA-based** predictive model to accurately forecast future trends in fossil fuel production, leveraging seasonal and historical data patterns to enhance prediction precision

## TECHNICAL SKILLS

**Languages** | Java, Python, JavaScript, Typescript, C, C++, HTML, CSS, Swift, MATLAB

**Technologies** | React, Node.js, Next.js, FastAPI, PostgreSQL/SQLite, MongoDB, Express, Git, JUnit, TensorFlow, PyTorch

**Software** | AWS, Google Cloud Platform, Heroku, Valgrind, Firebase, Postman